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ABSTRACT

Test wiseness programs and computer assisted study skills instruction (CASSI) were found to be valuable resources for college reading and study skills instructors and students at St. Cloud State University (Minnesota). Two booklets on test wiseness cues were reorganized and used as computer programs to allow the information to be presented outside class time, to encourage student involvement in the exercise, and to provide more variety in the instructional format. Written in an outline format, the first program explained each test wiseness cue and followed it with test items. A second program was added that included more clues and forced students to indicate the principle they were using to answer test questions. The CASSI program, which was included as an independent study module to the reading and study skills course, contained 12 lessons: (1) introduction to study skills, (2) motivation and achievement, (3) time management, (4) reading textbooks, (5) effective note taking, (6) concentration, (7) improving the memory, (8) procrastination, (9) studying for exams, (10) taking exams, (11) reducing test anxiety, and (12) writing papers. (Instructions for using CASSI are appended.) (MM)

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USING COMPUTER ASSISTED INSTRUCTION IN A READING AND STUDY SKILLS COURSE

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
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Paper Presented at

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CS 007 513

Computer Assisted Instruction (CAI), an instructional system with interaction between the computer and the student, can be a valuable aid to the classroom instructor. The instructors of the Reading and Study Skills course, St. Cloud State University (SCSU), use three computer programs. The Reading Center initiated the purchase of CASSI (Computer Assisted Study Skills Instruction) from Georgia Institute of Technology. This program, discussed by Sampson (1981) was modified slightly for use at SCSU. The other two programs, written by the author, focus on test wiseness cues.

TEST WISENESS PROGRAM

Students often experience difficulty in taking multiple choice and true-false tests. Therefore, most authors of study skills textbooks include information on taking tests. Millman and Pauk (1969) and Sherman and Wildman (1983) wrote books focusing on taking tests. In addition, Langer and Wark (1969) wrote two booklets on test wiseness cues. The first booklet describes numerous cues and the second booklet is a programmed text.

Students in the Reading and Study Skills course enjoyed using Langer and Wark's booklets. Therefore, this information was reorganized and used in a computer program for several reasons. First, the booklets took one to one and one-half hours of class time. Now students complete the computer program on their own time. The class time usually allocated to present this information is used to present/discuss other information. Second, when completing the booklets, some students read the information in a passive manner, that is, they paged ahead and

read the answer. When running the computer program, the student must read the questions, think, and answer the questions. Therefore, I believe, more students become actively involved in problem-solving and determining the appropriate answers. Third, the computer program varies the instructional format. Students respond positively to the opportunity to run the computer programs.

There are disadvantages to using CAI programs. Many students are fearful because they do not know how to operate terminals. SCSU Computer Center developed a videotape introducing students to computer terminal operating procedures. In addition, course instructors developed handouts acquainting students with procedures for operating the terminals (see Appendix for CASSI instruction). Another disadvantage is that the large scale computer systems may, on occasion, be "down", that is, it is not operating when the student scheduled time to run a program. Although the student may always reschedule, it is frustrating. This problem has not been eliminated.

Designing Curriculum to Include CAI

The Reading and Study Skills instructors followed a sequence when designing curriculum for the course (see Figure 1 adapted from Rauch & Samojeden, 1981). First, modules of instruction appropriate to the general objective were selected. The modules included time management, study strategies, note taking, test taking and independent study. Second, the instructors divided the modules into components and selected resources to meet the objectives of each component. Each module and its components are constantly evaluated and changed based upon new research, technology, and budget allocation.

Developing The Test Wiseness Program

Developing the test wiseness programs followed the steps depicted in Figure 2 (Rauch & Samojeden, 1981). Writing the first test wiseness program was simplified because Langer and Wark (1969) wrote their booklets in a programmed format. Wark (personal communication) permitted the information to be reorganized into a computer program format. In addition, the SCSU Computer Center support personnel assisted with the project. The computer consultant answered technical questions, helped with coding the program, and supervised the task of typing the program into the computer.

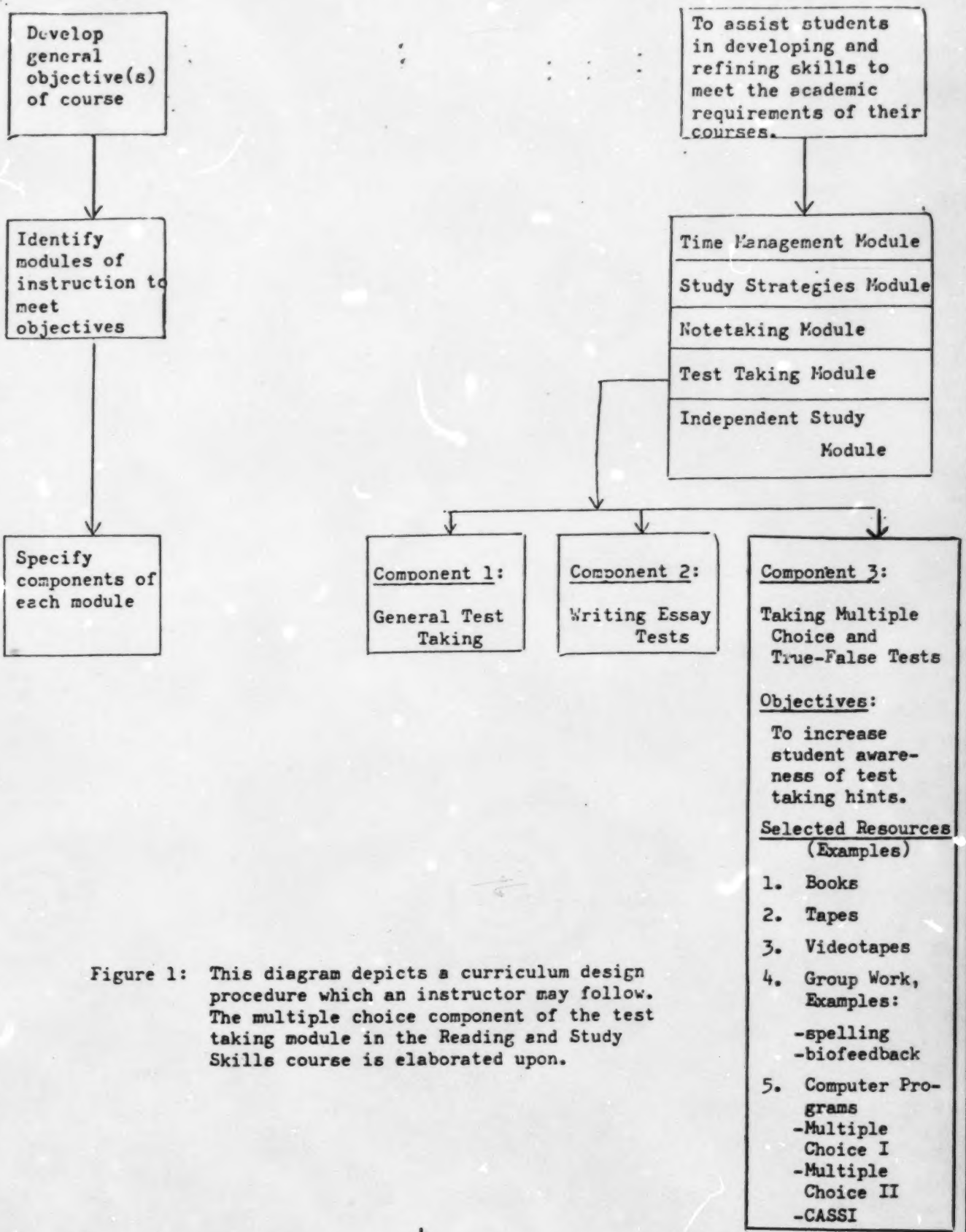
Develop general objective(s) of course
To assist students in developing and refining skills to meet the academic requirements of their courses.
Identify modules of instruction to meet objectives
Time Management Module
Study Strategies Module
Notetaking Module
Test Taking Module
Independent Study Module
Specify components of each module
Component 1: General Test Taking
Component 2: Writing Essay Tests
Component 3: Taking Multiple Choice and True-False Tests
Objectives: To increase student awareness of test taking hints.
Selected Resources (Examples)
1. Books
2. Tapes
3. Videotapes
4. Group Work, Examples:
-spelling
-biofeedback
5. Computer Programs
-Multiple Choice I
-Multiple Choice II
-CASSI

Figure 1: This diagram depicts a curriculum design procedure which an instructor may follow. The multiple choice component of the test taking module in the Reading and Study Skills course is elaborated upon.

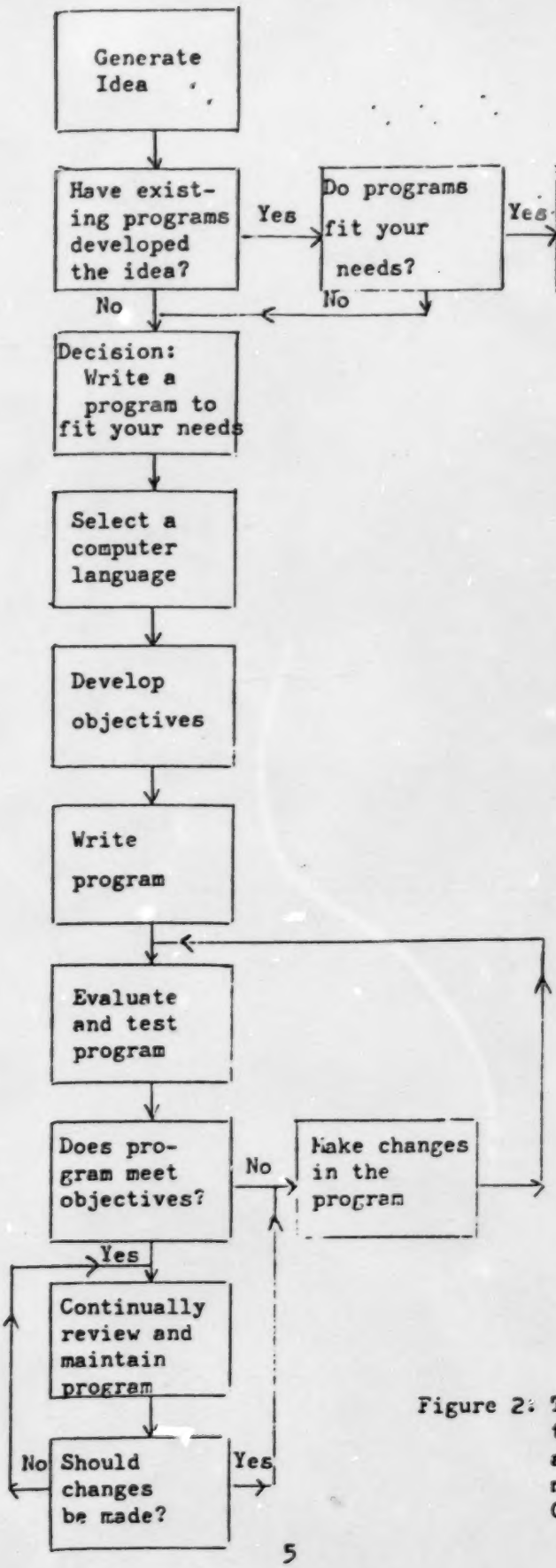

Figure 2: This diagram depicts the procedure which a curriculum designer may follow when developing CAI programs.

Before writing a program, a computer language must be selected. In this case, CALLS author language, a language developed at the University of Minnesota, was chosen. CALLS is relatively simple to use and can monitor students' progress, that is, it records students' scores.

The first program was written in an outline format. After the introduction, each test wiseness cue was explained followed by test items the student had to read and answer. Following is an example.

1.4.0
D. TWO ALTERNATIVES MEAN THE SAME

The correct alternative is probably not one of a pair of similar statements. If two alternatives mean the same thing, and there is only one correct answer, you can eliminate both of them. Neither will be correct. Then make your choice from the remaining alternatives.

Example:

The Treaty of Brest Litovsk was ratified by Moscow because:
A. Tsar Alexander I wanted to prevent Napoleon's invasion of Russia.
B. Russia was unable to keep up with the armament manufacture of Austria.
C. Russia could not keep pace with the military production of Austria.
D. Nicolai Lenin wanted to get the Soviet Union out of World War I.

Since alternatives B and C have similar meanings, choose your answer from alternatives A or D. The correct choice is D.

Answer the following two questions, (Type A, B, C, or D) Hint: Eliminate two alternatives that are similar in meaning.

1.4.2

The Battle of Bouvines in July 1214 resulted in:
A. The military success of Phillip II of France over King John of England and Otto IV of Germany.
B. The victory of Louis IX of France over England's Edward II.
C. The rout of the English and Flemish by Phillip III of France.
D. The military triumph of France under Louis IX over Edward II of England.

?A
Right. Eliminate alternatives that are similar in meaning.

At the conclusion of the program is the following summary.

> Many different study strategies will be discussed in class. When studying for a test, select the study strategies which work best for you. During the test it is to be hoped that you will be able to answer all of the questions. However, if the test contains a few questions you do not know how to answer, try to employ the test wiseness cues discussed in this program. With the use of these cues, you will, perhaps, be more able to select the correct answer.

Dr. David Wark, University of Minnesota, reviewed the program and in a personal communication suggested writing a second program for several reasons. One, students often need to practice with several examples of a principle to understand how to use the principle. Two, the first program was over-prompted. The second program could require students to indicate what principle applied when answering a question.

The format of the second program was based upon Dr. Wark's suggestions. First, three cues were grouped together. Then, a series of questions was presented. After each question, students indicated what cue they used. Following is an excerpt from the second multiple choice program illustrating the format.

1.3.0
Directions for Part III:
If you can eliminate two alternatives in a multiple choice test item, your chance of choosing the correct alternative increases. The following list of 3 cues may guide you in eliminating two alternatives.

1. If two alternatives mean the same thing, eliminate both of them and choose from the remaining alternatives.

2. If two alternatives are opposite in meaning, choose one of them. Eliminate the other two alternatives.

3. The correct alternative is often of middle value. Eliminate the extremes.

Read the test item. Review the 3 cues. Then, based upon one of the cues, you will be asked to identify the two alternatives you should eliminate.

1.3.5
3. Organisms of the Pavo Genus
   A. Change from masculine to feminine gender
   B. Display their plumage for the female
   C. Become female after existing for a period of time as a male
   D. Possess an excess quantity of masculine hormones

What 2 alternatives would you eliminate
1. A, B
2. B, C
3. B, D
4. A, C

?4
Good
1.3.6
3A What cue would you use?
1. Eliminate similar alternatives
2. Choose from opposites and eliminate other alternatives
3. Eliminate extremes and choose from middle values

?1
Good

Students are required to complete the first program; the second program may be applied toward the independent study assignment. Both programs are discussed in class and students are encouraged to articulate their views concerning which cues are the most helpful, which ones were unknown to them, and the general helpfulness of the programs. Students indicated that in the past they may have used cues in one testing situation and not in another. After studying and discussing test wiseness cues, they believe they will have a greater chance of consciously using the cues if the situation warrants. Overall, the response to the programs has been enthusiastic.

COMPUTER ASSISTED STUDY SKILLS INSTRUCTION (CASSI)

The instructors of the Reading and Study Skills course placed CASSI in the independent study module because the lessons within CASSI reinforced information taught in other modules. Usually five or six hours of class time are allocated to independent study. This time allows students to strengthen self-selected areas of interest, for example, comprehension, vocabulary, note taking, or test taking.

During independent study, students may elect to run the CASSI lessons which meet their needs. CASSI contains twelve lessons:

1. Introduction to Study Skills
2. Motivation and Achievement
3. Time Management
4. Reading Textbooks
5. Effective Note Taking
6. Concentration
7. Improving Your Memory
8. Procrastination
9. Studying for Exams
10. Taking Examinations
11. Reducing Test Anxiety
12. Writing Papers

The Reading and Study Skills course does not focus on writing papers, therefore, the Writing Papers lesson reinforces instruction received in the two composition courses students must take. Since students must complete the first multiple choice program, they may omit lesson 10, Taking Examinations.

Summary

The Reading and Study Skills instructors and the students have found the computer programs, CASSI and the two test wiseness programs, to be valuable resources. Instructors use the additional class time to

present/discuss other information. Students enjoy the varied format of possible materials they may use. Also, students appreciate doing the programs at their own pace. Plans are being formulated to add more computer programs to the current list of resources.

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APPENDIX

CASSI

Computer Assisted Study Skills Instruction (CASSI) is designed to assist you in improving your study skills. Twelve different topics are included in CASSI:

1. Introduction to Study Skills
2. Motivation and Achievement
3. Time Management
4. Reading Textbooks
5. Effective Notetaking
6. Concentration
7. Improving Your Memory
8. Procrastination
9. Studying for Exams
10. Taking Examinations
11. Reducing Test Anxiety
12. Writing Papers

The reverse side lists the instructions for running CASSI. Use the terminals in the Computer Center in Brown Hall basement. The hours of operation are posted in the Computer Center. A consultant is usually on duty.

If you wish, schedule an appointment with your instructor for help with operating a terminal. It is sometimes possible for the Reading Center staff to use the terminal in the Counseling Center.

If you are in 019 Reading and Study Skills, record the time(s) it takes you to run the lesson(s) you wish to do. You do not have to do every lesson. Do not do lesson 10, Taking Examinations. Give the lessons plus the times to your instructor when you have your final conference. Or, attach the printout to your Independent Study work and give all your I.S. work to your instructor when you have completed your work.

Please use the DEC terminal so you will get a printout for CASSI.

INSTRUCTIONS FOR USING CASSI

What appears on your terminal	What you do/type
	Turn switch to "ON" Switch may be 1) on the front at the top 2) in the back 3) by your knee 4) look to see if there are any special instructions to follow.
1. ——————→	1. Press "Return" key once
2. WHICH SYSTEM	2. Type 2 and press "Return"
3. GO	3.
4. date time MECC TIMESHARE SYSTEM... USER NUMBER:	4. Type your user number and press "Return", user number: _____
5. PASSWORD XXXXXXXXX	5. Type your password and press "Return". Password: _____
6. READY	6. Type: X,TUTOR
7. WELCOME TO MECC MULTITUTOR MULTITUTOR WHAT TYPE OF TERMINAL ARE YOU USING? >	7. Type: TELERAY if on screen terminal with separate keyboard. DEC all other terminals (printing terminal for example). press "Return" (suggestion: use DEC terminal)
8. Please enter your name >	8. Type your name and press "Return"
9. What is the name of your group? (press "Return" if none)	9. Press "Return"
10. Multitutor Enter the name of the lesson you want. >	10. Type: USER
11. Type the new user number	11. Type: SUSSØØ3 (note Ø means zero)
12. User number reset to ... SUSSØØ3 Multitutor Enter the name of the lesson you want.	12. Type: CASSI and press "Return"